

LARIMER COUNTY | ENGINEERING DEPARTMENT

P.O. Box 1190, Fort Collins, Colorado 80522-1190, 970.498.5700, Larimer.gov

The role of the Advisory Board is to advise the Board of County Commissioners and appropriate departments on environmental and science-related issues that affect Larimer County.

Environmental and Science Advisory Board.

MINUTES.

Date: October 8th, 2024.

Time: 6:00 – 9:00 p.m.

Location: Rm 333 Lake Estes, 200 West Oak St., Fort Collins, Colorado and Virtual by Zoom.

Contact: Shelley Bayard de Volo, sbayard@larimer.org or 970.498.5738.

MEMBERS	-	STAFF	-	GUESTS
Rodger Ames – Chair	X	John Kefalas *	X	Earthworks
Tasha Carr	X	Shelley Bayard de Volo ‡	-	Andrew Klooster
Anna Cloud	-	Traci Shambo [†]	X	-
Jim Gerek	X	Caryn Nezat [‡]	X	-
Leo Grassens	X	Lea Schneider ^α	X	-
Matthew Haag	X	-		-
Zachary Maffeo	X	-		-
Lark Murphy	-	-		-
Andrew Newman	-	-		-
Barry Noon	X	-		-
Nicole Poncelet-Johnson	-	-		-
Natalie Walsh	X	-		-
Chris Wood	X	-		-

X = present; * = Commissioner Liaison; [†] = Engineering; [‡] = ESAB Liaison; [§] = Climate and Sustainability Program; ^α = Larimer County Health and Environment; [£] = Community Infrastructure, Planning and Resources.

Call to Order: 6:00 p.m.

1. **Amendments or additions to the agenda** – Chair Rodger Ames would like to make a slight adjustment to the agenda. He would like to give Earth Works presenters a longer time slot and the AQMAC time allotment is expected to be shorter
2. **Introduction of members, staff and guests** – Guest Speaker, Andrew Klooster, from Earth Works Action introduced himself. Caryn Nezat (County Engineering Department) introduced





herself as sitting in for Shelley Bayard De Volo's absence and Traci Shambo (County Engineering Department) was also sitting in to support Caryn.

3. **Public Comment** – None.

4. **Commissioner's Update** – Making progress on air quality monitoring stations and programs. For the commercial [Mow-Down program](#), within the first week, there were 14 applicants for grants from commercial landscapers to purchase electrified landscaping equipment. Ballot Measure 1A is the transportation funding measure that will help the County build capital improvement projects including multi-modal infrastructure. Office of Emergency Management (OEM) received a grant to analyze methods for processing woody biomass coming from fuels reduction treatments. If members are interested to learn more, they can go to the OEM's [webpage](#) on Woody Biomass. If the ESAB wants to hear about the programs they can invite Josh Roberts, Emergency Management Coordinator, to update the board. The commissioner worked with the County Attorney to develop a 1-page memo on open meetings and the conditions under which Boards are to hold open meetings. Tomorrow afternoon there is a Water Master Plan meeting, followed by a joint meeting with the BCC and PC on the draft Water Master Plan. The commissioner is addressing how Boards can weigh in on the draft plan and provide feedback that can be incorporated. He expects the Plan to be adopted by end of year.

Discussion Items

- Earthworks Optical Gas Imaging – Andrew Klooster discussed Earthworks history. He described the advocacy work they do. They use optical gas imaging (OGI) cameras to identify leaks at oil and gas facilities. They provide video evidence of leaks to state regulatory agencies. He discussed the state and federal regulations and permitting and the limits of what the OGI can provide. Andrew then discussed the work they did at the Prospect Energy site and how that work helped to support Larimer County's efforts to build a case of a long-term emissions violations, including significant and lethal amounts of hydrogen sulfide. Ultimately, the operator was held accountable and can no longer operate in Colorado. Lea Schneider described the County Health Department involvement in the process and the final settlement process and the remaining tasks to plug, abandon low producing wells (aka "orphan wells") and clean up the sites. Slides from the presentation are attached with these minutes.
 - Update on Air Quality Monitoring Advisory Committee (AQMAC) - Rodger updated the board on the AQMAC's progress. He discussed a grant focusing on near source air quality monitoring that can provide information on the source of the pollutants. Rodger used one of the slides presented in the last Advisory Committee meeting to show how the chemical signature of the volatile organic compounds (VOCs) can differ depending on the source from where the VOC's came (vehicles vs oil and gas industry).
5. **Approval of Minutes** – Jim motioned to approve the September minutes, and Leo seconded. The September minutes were approved by acclamation.
6. **Updates and Round Table**
- Tour of Rawhide Power Station – Rodger thanked Chris for the Rawhide Power Station tour. Several ESAB members attended.



- CSFR ESAB Liaison – Leo is meeting with Heidi to coordinate the ESAB’s representation to the CSFR initiative.
 - Ozone precursor study – Rodger mentioned the Regional Air Quality Monitoring Program and grants (\$90K) that were recently approved. Lea Schneider, Larimer County Health Department, explained that the County worked with the State Air Pollution Control Division to obtain regulatory State ozone & nitrogen dioxide (NO₂) monitors. Working with local agencies, two monitors have been installed already and a third monitor will be online soon. People can go to the CDPHE’s [web map](#) to see the monitors and their readings. Lea then explained how the VOC/pre-cursor study proposed by the ESAB and CSU’s Air Quality research team might get implemented as part of a larger regional study that the CSU team is leading. More discussions in the new year are planned to discuss the future of the program and using the grants effectively.
7. **Issue Index** – will be updated.
 2. **Agenda Topics for Future Meetings** – Barry may have a 1041 presentation; Barry can also present on the National Forest initiative to evaluate carbon sequestration and biodiversity. Engineering might be able to present on the Larimer Moves Transportation Master Plan; George Rinker (former ESAB member) will be discussing Climate Science in December.
 8. **Adjourn** – The meeting adjourned at 8:40 PM.

Earthworks Optical Gas Imaging



Andrew Klooster
CO Field Advocate
aklooster@earthworksaction.org



What is oil and gas pollution?

- **Volatile organic compounds (VOCs)** include benzene and toluene which impact human health
- **Ozone or smog** is formed by reactions between VOCs and nitrogen oxides (another pollutant partly attributable to oil and gas activities) in the presence of sunlight
- **Methane** is a major greenhouse gas



Optical Gas Imaging (OGI) Makes Invisible Gas VISIBLE

- A FLIR GF320 OGI camera visualizes methane and other volatile organic compounds
- Camera **does not** speciate or typically quantify emissions
- OGI is used to detect leaks, malfunctions, and emissions events
- Not all emissions events violate air quality regulations. But all emissions impact air quality

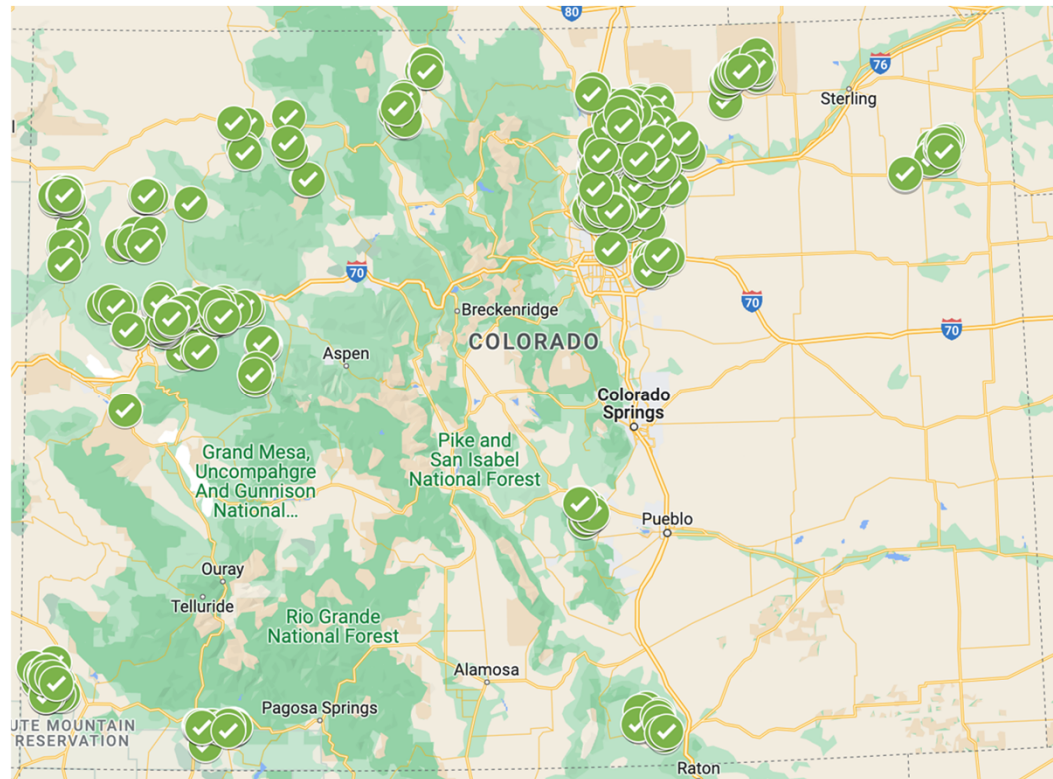


How Earthworks uses OGI cameras

- Survey oil and gas facilities
- Document emissions and identify sources
- Provide evidence to state regulatory agencies
- Evaluate: are rules being enforced? Is industry being held accountable?



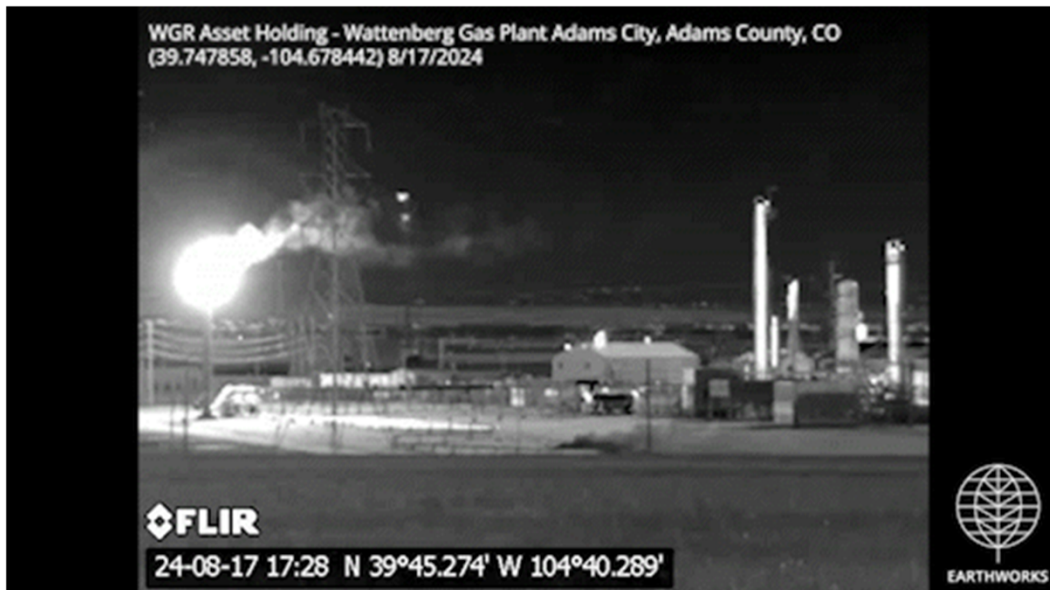
800 Sites Surveyed in Colorado since 2014



Violations: Leaks and Malfunctions



Not Violations: Uncontrolled Emissions



Not Violations: Pre Production Emissions



Prospect Energy

- **64 surveys** of **6 sites** since **January 2021**
- **14 complaints** filed with Air Pollution Control Division
- **29 surveys** and **7 complaints** of Krause Tank Battery
 - Surveys of that facility on average every other month since January 2021



Key Takeaways

- Emissions at Prospect facilities were violating regulations
- OGI a critical tool for highlighting noncompliance in this scenario
- Larimer County increasing local inspection capacity and capabilities essential for oversight
- Accountability vs compliance

